Deciphering the Difficulty for Pathologic Diagnosis of Hodgkin Lymphomas

Ke-seng Zhao and Meigang Zhu*
Department of Pathology and Pathophysiology, Southern Medical University Guangzhou, China

Clinical Image

Hodgkin Lymphoma (HL) is composed of 30% of lymphoma. It is difficult for pathologic diagnosis because of a variety of morphology in Reed-Sternberg Cells (R-S cell) and reactive inflammatory cells on the background [1-3]. According to our experience, following points may help the diagnosis of HL:

1. The size of diagnostic R-S cell is 2 times than one B-immunoblast or one histocyte in the same field of section (Figure 1) [4].

2. The diagnostic R-S cell usually has 2 nuclei, which includes big nucleolus. The size of

Figure 1: The size of a diagnostic R-S cell A) Is 2 times than a histocyte. B) A B-immunoblast. C) In the same field.

Figure 2: The size of diagnostic R-S cell nucleolus (arrow) is equivalent to the size of small lymphocytes around the R-S cell.

Figure 3: Series R-S cells include A-Diagnostic R-S cells (two nuclei), B-variant R-S cell with mononucleus; C-variant R-S cell with multi- nuclei.
nucleolus in diagnostic R-S cell is equivalent to the size of one erythrocyte or one small lymphocyte (about 5 µm) in the same field of section (Figure 2) [4].

3. The appearances of series R-S cells well help to diagnose HL. A series R-S cells includes more than 2 types of R-S cells, i.e. one is diagnostic R-S cells (with 2 nuclei) served as a marker, others are one or more variant R-S cells, including mononuclei, multinuclei, lacuner, mummigied R-S cells (Figure 3) [4].

4. Quantitative indicator of R-S cell helps for classified diagnosis of CHL. i.e. 5-15 R-S cells/HPF for Mixed Cellular CHL (MCCHL), >15 cells/HPF for Lymphocyte Depleted CHL (LDCHL) (Figure 4). <5 cells/HPF for Lymphocyte Rich CHL (LRCHL) [2,5].

References